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Report of Work done in Nutrition in States

1956

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Andhra

I. *Diet Surveys* : Diet surveys were carried out by weighment of foodstuffs method on 144 families and 873 children under 12 years of age belonging to the lower middle class and middle class families in the town of Visakhapatnam and surrounding rural areas within the Taluq. Their monthly income varied from Rs. 50/- to Rs. 400/-. A marked rise in the consumption of milk, ghee, vegetables and fruits was seen in higher income groups. This was accompanied by a fall in the consumption of cereals. Details of these surveys are given in Tables 1 and 2

II. *Nutrition Surveys* : 542 adults and 331 children under 12 years from families among whom diet surveys were carried out, were examined for their nutritional status during the period. The majority of the subjects surveyed exhibited one or more signs of deficiency states, resulting from the lack of adequate intake of vitamins A, B Complex and C. A larger incidence of deficiency conditions like xerosis conjunctivae, paresthesia, calf tenderness, angular stomatitis, etc. were more common among the families belonging to low income groups. Details are given in Tables 3 and 4.

III. *Investigations* : The Beri Beri Research Unit established in Visakhapatnam in collaboration with the Williams Waterman Foundation, U.S.A., and Nutrition Research Laboratories, Coonoor, has been carrying out clinical and biochemical investigations to (a) assess the incidence of thiamine deficiency in the population of Visakhapatnam town and its suburbs, and (b) investigate and treat frank cases of beri beri coming to the hospital. The urinary thiamine excretion, pyruvic acid and lactic acid n blood were estimated. The results so far obtained indicated no significant differences between the suspected cases of subclinical beri beri and the average healthy individuals. A study of thiamine content in breast milk samples (132) collected from Visakhapatnam town and surrounding rural areas has revealed that in many cases the level of thiamine in milk is considerably lower than the accepted normal values. Administration of 10 mg. thiamine hydrochloride per day for a week brought about a marked increase of thiamine in milk, the response being greater in the cases where the thiamine values were originally considerably low. This investigation suggests that subclinical thiamine deficiency might occur in pregnant and lactating women more frequently than is realized. The unit has since been transferred to Guntur where it is now working.

IV. *Ameliorative Measures* : Large-scale milk feeding programmes were carried out throughout the State during the period in which about

350 tons of UNICEF skim milk powder and multi-vitamin tablets were distributed to the vulnerable groups of the population.

V. *Education and Publicity*: Nutrition education and publicity by all possible means—lectures, films, practical cooking demonstrations, etc.—were undertaken as usual in different areas of the State.

Bihar

I. *Diet Surveys* : Extensive diet surveys in various rural areas of the State including many of the Community Project Areas were undertaken, using the weighment of foodstuffs method. A total of 250 families spread over Purnea, Darbhanga, Ranchi and Muzaffarpur Districts was surveyed, during the last year. The principal crops grown in these areas were paddy, maize, red gram, Bengal gram, and sugar cane. Repeat surveys of the same families at different periods of the year have shown that the intake of individual foods varied according to the seasons in which they were grown; the total calorie intake and the nutrient content of the diet, however, varied within very narrow limits. It was found that the rural population, mostly cultivators and labourers, amongst whom the majority of diet surveys were undertaken, consumed less protective foodstuffs than is desirable and that their calorie intake also fell short of recommended levels. Full details of these surveys are given in Tables 5 and 6.

II. *Nutrition Surveys* : Nutrition surveys of 1,083 children from families whose diets had been surveyed and of 483 children from schools in the Ranipatra (Purnea), Pusa Community Project Area (Darbhanga), Semartoli and Bhowar Pahar (Ranchi) and Bihar Ekangarsari (Patna) were carried out. The nutritional status of these children left much to be desired and various signs and symptoms attributable to deficiency of vitamins, especially of B_2 complex vitamins were encountered. Rough and dry skin and xerosis conjunctivae were found in an appreciable number of children. Calf tenderness was present in 1·2 to 5·3% of children examined in the various localities. Disorders of the alimentary system with anorexia and diarrhoea were seen in over 10% of the children. In Patna and Monghyr districts, enlargement of liver and spleen was present in 6 to 15 of children examined. The results are summarised in Tables 7 and 8.

III. *Investigations* : Further work in the control of goitre was taken in hand. A survey of the incidence of goitre in relation to drinking water from deep tube wells (200 feet) and other sources was carried out. In Bulakipore and Sonar Got, over 25% of the people using tube well water were found to have developed goitre within 2 to 6 months. The incidence among the people of the same village who used other sources of water supply was 2.5% or less. Analyses of water from 4 of these tube wells showed that the iodine content was on an average 1·32 µg./litre as against

6.47μg./litre in 5 of the superficial wells in the same area. Two pilot schemes are already operating in the affected areas and weekly doses of 10 mg. of potassium iodide tablets have been distributed to the affected people. Progress in the control of goitre in these areas appears to be satisfactory and further work for the eradication of this disease is contemplated.

The following investigations are in progress : (1) estimation of sodium and potassium content in human blood plasma of healthy adults, (2) changes in tomato juice on storage under different conditions, and (3) micro-estimation of iodine in foodstuffs.

IV. *Ameliorative Measures* : The distribution of UNICEF milk powder to the vulnerable groups of the population figured mainly in the ameliorative programme carried out during the year. Periodical visits to industrial canteens by the Nutrition Officer of the Department with a view to rendering advice for the improvement in the quality of foods served there, was also a regular feature of the activities of the Department.

V. *Education and Publicity* : "Grow and eat more vegetables campaign" started last year with the active co-operation and support of the Agricultural Department of the State has been continued. Lectures on nutrition and correct dietary habits were delivered to Gram Sevaks of Panchayats and nurses and other members of the staff of the Public Health Department.

Bombay

I. *Diet Surveys* : Diet surveys were carried out by the questionnaire-cum-weighing method on 80 families amongst the Dubla community in Surat District, whose occupation was mainly casual farm labour and domestic service. The average intake of all items of foodstuffs was found considerably below the desired levels. Details of these surveys are given in Table 9 and 10.

II. *Nutrition Surveys* : Nutrition surveys of 172 adults and 95 children belonging to the above mentioned 80 Dubla families and other 163 school children were undertaken. Nutrition surveys were also done on 306 school children of both sexes of N.K.E. Society's High School, Matunga, and 203 children of both sexes belonging to B.E. League's Worli High School, Worli. Dry and rough skin, and poor musculature, were the common findings in children from all these localities. Among the Dubla men and women a high incidence of glossitis attributable to B_2 complex deficiency was noticed. Details are given in Tables 11 and 12.

III. *Investigations.*

(1) *Nutrition Clinic* : 19 patients (10 males and 9 females) were admitted to the Nutrition Clinic for investigation and treatment of nutritional disorders during the period. The majority of these patients were treated for generalized undernourishment and anaemia of different grades with clinical evidence of protein deficiency.

(2) Studies on the nutritional evaluation of foodstuffs have been continued. The essential amino acid composition of five leafy vegetables and four millets has been determined by microbiological methods.

(3) The effect of fermented foods on fatty infiltration of liver was investigated. A fermented preparation known as "*Idli*", the chief constituents of which are rice and black gram, was tried in albino rats. Replacement of dietary protein to the extent of 50% by *Idli* protein was found to prevent fatty infiltration of liver which develops on high-fat-low-protein diets.

(4) Investigations on the effect of dietary protein on the utilization of vitamin A and β-carotene have indicated differences in the capacity of different proteins to promote liver storage of vitamin A. A better storage of the vitamin was observed with casein than with fish meal. The level of casein in the diet seems to exert an influence on liver storage of vitamin

A in rats fed β-carotene supplements. It was found that on varying casein levels between 10 and 30%, better storage was obtained on the lower protein levels of intake.

(5) The biological value and the digestibility coefficient of proteins determined on three leafy vegetables are given below :

		B.V.	*D.C.*
Carthamus tinctorius	...	61.3	66.2
Chenopodium album	...	78.7	80.2
Trigonella foenum graecum	...	83.8	78.1

(6) The quantitative output of milk per day of 71 mothers from five centres in Bombay was determined by test feeding techniques for the lactation period 1 to 17 days post partum. The average 24-hour yield was 11 oz., the range being 4 to 25 oz. The daily output in 5 mothers between 2 to 10-1/2 months of lactation was 17.4 oz.

(7) The work of compiling data on the average heights and weights of 21,000 school children belonging to the primary and secondary schools of the six districts of Ahmedabad Division of Bombay State was completed and the results are given in Tables 13 and 14.

IV. *Ameliorative Measures* : The distribution of UNICEF skim milk powder through organized centres has been the main item of ameliorative measures in Bombay State. Over 170 tons of skim milk powder was distributed to deserving mothers and children through maternity and pediatric wards or hospitals and maternity and child welfares centre. At the peak of the distribution over 11,000 benificiaries took advantage of this scheme.

An extensive school feeding programme initiated out last year through the aid of UNICEF was continued and over 290 tons of skim milk powder was distributed through 144 centres in 14 districts in Bombay. About 44,000 school children benefited from this scheme.

V. *Education and Publicity* : Advice on nutritional and allied problems was rendered to various departments of the Government of Bombay. The Nutrition Department continued to disseminate knowledge on the principles of nutrition and practice of dietetics by organizing nutrition education stalls in exhibitions, distribution of literature, arranging demonstrations of nutritious snacks among the labour population and by lectures, film shows, etc. to population groups in Greater Bombay as well as in the rural areas.

Himachal Pradesh

Diet Surveys : A diet survey was carried out on 6 families of agriculturists in the interior of the Simla Hills. The details are given in Tables 15 and 16.

Hyderabad

1. *Diet Surveys* : Diet surveys by weighment of foodstuffs method were undertaken on 48 families in two villages in the National Extension Blocks in Aurangabad District. The families were mostly of small agriculturists, agricultural labourers and petty tradesmen. The average monthly income per consumption unit was Rs. 11 only. The principle crops of the area are jowar, bajra, groundnut, red gram, green gram and black gram. Except in the case of cereals, the consumption of which was found quite adequate, all the other items of food consumed by these people were below the recommended levels. Details of these surveys which were made at the time of the Kharif harvest are given in Tables 17 and 18.

II. *Nutrition Surveys* : Nutrition surveys of 201 adults and 93 children were undertaken in the villages referred to above. Xerosis conjunctivae, mild anaemias and oral signs of B_2 complex deficiency were observed in an appreciable number of children. The results of nutrition surveys on another sample of 1,362 children in Hyderabad City and Aurangabad District were almost similar so far as the deficiency symptoms were concerned. Details are given in Tables 19 and 20.

III. *Investigations.* (1) The effect of feeding skim milk supplement was studied in primary school children in Hyderabad City. Altogether 533 boys were under investigation of which 326 received the supplement and 207 were kept as controls with no supplementary food of any kind. The results were assessed at the end of six months. The average increases in heights and weights in the two groups were as follows :

		Average gain	
		Height inches	*Weight lb.*
Controls	...	0.28	0.37
Skim-milk-fed	...	0.45	0.88

There was general improvement in the condition of skim-milk-fed group and a marked diminution in the incidence of deficiency signs.

(2) The Nutrition Section of the Public Health Directorate co-operated in a protein malnutrition survey in Pattancheru near Hyderabad undertaken by the Nutrition Research Laboratories, Coonoor.

(3) Studies on endemic fluorosis have been continued. Attempts are being made to select the best method for the estimation of fluorine in different specimens of foodstuffs and water.

IV. *Ameliorative Measures* : Over 490 tons of skim milk powder was distributed to 25,000 school children and 13,000 adults from the vulnerable groups with the assistance of schools, M.C.H. workers and other voluntary organizations. The subsidized fresh whole milk distribution scheme started by the Hyderabad Women's Milk Committee was continued and 200 beneficiaries mainly from the middle and lower economic groups of the population took advantage of this scheme.

V. *Education and Publicity* : Nutrition education by means of lectures on topical subjects, publication of popular articles in the local dailies, posters, leaflets, etc. was carried out during the year.

Madras

I. *Diet Surveys* : The two regional units at Madurai and Poonamallee, have carried out diet surveys on 131 families in 9 villages and 10 institutions in Madurai and Chingleput districts. Details of these surveys are given in Tables 21 to 23.

The majority of people covered by the surveys consumed parboiled rice but raw rice and ragi were also used in all areas in comparatively smaller quantities. Home-pounded rice was found to be used in the three Gandhigram institutions and in the villages of Kunnathur in Madras and Velliankundram in Madurai District. The consumption of leafy vegetables, protective foodstuffs and fats and oils was below the recommended levels and consequently the inadequacy of proteins, minerals and vitamins of A, B_2-complex and C was clearly noticeable in the diets.

II. *Nutrition Surveys* : Nutrition surveys on 792 boys and 335 girls employing the Routine Nutritional Assessment Schedule and on 196 boys and 264 girls using the Rapid Nutritional Assessment Schedule were carried out by the two regional nutrition units. Xerosis conjunctivae and the involvement of oral and other mucocutaneous sites suggestive of an inadequate consumption of vitamins A and B_2-complex respectively were found in appreciable numbers. Besides these, evidence of poor physique was a marked feature among the school children of the rural areas. The results are summarised in Table 24.

The measurements of heights and weights of 7,905 children and adolescents were carried out during a major exhibition in 1955. The data are being analysed.

III. *Investigations* : The comparative investigation on the nutrient content of common South Indian food preparations as purchased from restaurants and as prepared in the laboratory was continued. The results of this work will be of value in computing food values during diet surveys.

Four hostel diets were studied in detail during the year with the object of bringing about necessary improvements in them as well as to determine the difference between mass cooking and home cooking.

Analysis of 32 different species of edible fish used commonly in Madras State was carried out. The studies have revealed a significant variation in the nutrient content of the different species.

Several preserved foods in common use were analysed for their nutritive value.

Other investigations included the nutritional evaluation of processed foods and common green leafy vegetables. Supplementation of rice diet by leafy vegetables brought about a significant increase in body weight in albino rats.

IV. *Ameliorative Measures* : During the year 515 tons of skim milk powder released by the UNICEF was distributed among the vulnerable groups of the population through the assistance of social service organizations in the State. About 20,000 people took advantage of this scheme daily. An emergency allotment of 90 tons of skim milk powder was distributed to the cyclone-affected people in Tiruchirapalli, Tanjore, Madurai and Ramanathapuram Districts. In addition, the cyclone-affected people in the southern districts of the State were supplied with multivitamin tablets, shark liver oil and food yeast.

Provision of mid-day meals to children of eligible communities and those of malnourished children was continued during the year; 73,000 pupils attending 922 labour schools benefited by the scheme. In the elementary schools run by the Corporation of Madras, 11,000 malnourished children received free mid-day meals.

With the assistance of UNICEF gift rice and skim milk, short-term scheme of subsidized mid-day meals were undertaken by the two units—the Nutrition Unit at Madras (Poonamallee Health Unit) and Gandhigram Community Project Area (Madurai District); 150 school children benefited by this scheme.

Periodical visits to several industrial canteens in the State were made by Nutrition Officers of the Department and suggestions regarding kitchen sanitation and improvement of nutritive value of the menus served were given to the managements from time to time.

V. *Education and Publicity* : The occurrence of important festivals in the State was taken advantage of and 8 nutrition exhibitions were conducted during the time of the festivals. Ten films produced on "Food and Nutrition" by the Department were shown to an estimated audience of 2,00,000 people. Nutrition talks on topical subjects were a common feature of the publicity programme. In order to popularise parboiled rice,

the Department has taken very active steps by way of the publication and wide distribution of a pamphlet "Rice We Eat" in Tamil and English. "Rice and Health" and related topics were broadcast from the All-India Radio, Madras, in English and Tamil.

Lectures in nutrition, demonstrations and practical classes were given to 42 members of the subordinate health personnel. Special lectures on nutrition accompanied by demonstrations were given to medical graduates and women medical officers and M.C.H. workers during the period.

North-East Frontier Agency

The health administration of the North-East Frontier Agency (NEFA) has been taking great interest in the health, diet and nutritional status of the tribes inhabiting this mountainous region. As is well known, this is one of the goitrous regions in India, and it is commendable that the administration is actively interested in the problem of goitre control. It has now been widely admitted that the aetiology of endemic goitre is more complicated than was believed hitherto. The results of a preliminary survey in a few localities within the NEFA area are interesting from this standpoint as will be seen from the following account.

Goitre surveys were done in three villages within a 30-mile radius. Criteria used for recording of goitres were analogous to those adopted by the W.H.O. Study Group on goitre in 1952. The results are summarized in Table 25.

Whereas the overall incidence is 40% of the surveyed population, it is 30% in males and 52% in the females. Further, as will be clear from the table, the incidence varied in the three villages. It is expected that a thorough study of the external environment, dietary habits, sanitation, etc. would throw some light on this intricate problem. It is hoped that more extended surveys including the collection of all relevant information will be undertaken in the coming year by the N.E.F.A. administration.

Punjab

I. *Diet Surveys :* Diet surveys using the weighment of foodstuffs method were carried out in 13 families of factory workers in the Indian Woollen Mills, and 37 families in the Orient Carpet Mills, Chheharta in Amritsar District. The income per family comprising, on an average, four consumption units per family, ranged from Rs. 92 to Rs. 103 per month. The dietary intakes of these families were found more or less satisfactory except for the consumption of leafy and nonleafy vegetables and flesh foods. Details of these surveys are given in Tables 26 and 27.

II. *Nutrition Surveys* : Nutrition surveys were carried out in 11 of the above families whose diets were considered inadequate. The incidence of nutritional deficiency diseases encountered in these families was quite high. Symptoms attributable to inadequate consumption of vitamin A and B_2-complex were found in a majority of members of these families.

III. *Investigations* : The Goitre Pilot Project, sponsored jointly by the Government of India and the Government of Punjab, has completed its first phase of activity. This consisted of diet, nutrition and goitre surveys in Kangra District. The data so collected are being analysed.

A sample of 404 children from primary and lower secondary schools in Amritsar District was examined for blood haemoglobin. In 140 children haemoglobin was less than 70% (Sahli). In another sample of 54 children from Ludhiana District 5 children had less than 10g. haemoglobin per 100 c c. blood and 2 had plasma protein less than 5%.

IV. *Ameliorative Measures* : 342 tons of UNICEF skim milk powder was distributed to 7,483 children under 12 years of age and 951 pregnant and nursing mothers in Amritsar and Ludhiana Districts. The free UNICEF skim milk and other gifts such as calcium and iron tablets were also distributed to the people in flood affected areas and other vulnerable groups of the population throughout the year. 33 tons of iodised salt was distributed to the goitre-affected families of Kangra Valley.

V. *Education and Publicity* : Nutrition education activity consisted of popular lectures to health visitors and sanitary inspectors attending their regular courses, participation in health exhibitions, publication of topical articles on nutrition in the local dailies, etc.

Travancore-Cochin

The Nutrition Section of the Public Health Department has not yet been organized. The only activity related to nutrition undertaken by the Health Directorate was concerned with relief measures. The help of Maternity and Child Health Centres, voluntary organizations and orphanages and charitable institutions, was useful in distributing to vulnerable groups of the population 335 tons of UNICEF skim milk powder and 967 tons of UNICEF rice.

Uttar Pradesh

I. *Diet surveys* : Diet surveys combining questionnaire and weighment of foodstuffs methods were carried out in 80 families in Lucknow, Hardoi, Mirzapur and Thana Districts. The families belonged to low income groups between the range of Rs. 50 to Rs. 150 per month. Although the diets were adequate in calories, the consumption of protective foodstuffs was not satisfactory from the nutritional standpoint. Details of these surveys are given in Tables 28 and 29.

II. *Nutrition surveys* : A total of 1,000 individuals were examined for nutritional status ; of these 275 were from the groups on which diet surveys had been done. The results are given in Tables 30 and 31.

III. *Investigations* : (1) Large-scale consumer trials with dried food yeast powder were conducted on 125 adults in Thana village, Basti District, 57 adults in Indaurabagh in Lucknow District, 107 adults in Bakhshi-ka-Talab-cum-Training Centre (village level worker trainees), and 267 children in Bilgram town, Junior High School in Hardoi District. Food yeast was incorporated in pulse, curried vegetables or in Bengal gram flour preparations. Feeding was started with 1/8 oz. gradually raising the level to 1/2 oz. per head per day. Food yeast was found acceptable but the impression gained was that generally people did not like to take it as a supplement to their daily dietary. The results of these feeding trials showed that there was slight improvement in the general condition of the people taking the food yeast. The symptoms of vitamin B-complex deficiencies where present had disappeared towards the end of the feeding period which lasted from three to four months.

(2) A goitre survey was done on 1,500 people in Bisouli Tehsil of Badaun district ; 5 per cent of the population showed enlarged thyroids. The incidence was greater in the 10—19 year age group. In the Noorpur Koria area of the same district, an incidence of only 1.6 per cent was found in a total of 3,373 persons examined. Here too, the incidence was higher in school children. Measures to control and prevent the disease by administration of iodide and improvement of water supply have been undertaken. Administration of liquor iodi mitis to cases of goitre in the Karkheri area have already given good results.

(3) Laboratory investigations consisted among other things, of analysis of foodstuffs commonly used in the State.

IV. *Ameliorative measures* : Mid-day meal programmes are in force in practically all the higher secondary schools in the State. Only a nominal sum of eight annas per month is collected from each student.

About 275 tons of UNICEF skim milk powder was distributed to the vulnerable groups of the population throughout the State, with the assistance of M.C.H. centres, orphanages and voluntary organizations. People in the flood-affected areas of the State also received about 45 tons of UNICEF skim milk powder as part of relief measures adopted by the State Government.

About 4,000 expectant and nursing mothers of the lower middle class families in the cities of Kanpur, Allahabad, Varanasi, Agra and Lucknow, derived benefit from the Government-sponsored fresh whole milk scheme for which the State spent Rs. 2,30,000 during the course of the last year.

Iodized salt was distributed to the residents of Jaunsar-Bawar, a goitre-affected area in Dehra Dun District. The distribution of iodized salt to school children reported last year has been continued.

V. *Education and Publicity* : Activity in the field of nutrition education consisted of demonstrations, exhibitions, short talks, etc. Publication of popular articles on nutrition in the local dailies was also continued.

West Bengal

I. *Diet surveys* : Diet surveys by the weighment of foodstuffs method of 86 families consisting of 664 members were carried out in the sub-division of Barrackpore, Bongaon, Basirhat and Diamond Harbour in the district of 24-Parganas. Details are given in Tables 32 and 33.

II. *Nutrition surveys* : A total number of 521 children between the ages of 5 to 17 years were examined in the districts of Nadia, Darjeeling, Bankura and Howrah, using the Routine Survey Schedule. Results are given in Tables 34 and 35. 100 children were surveyed using the Rapid Nutrition Survey Schedule in the vilages of Jagacha, Abhoynagar and Nappatey in Howrah District.

III. *Investigations* : Consumer trials with food yeast were carried out on 291 families consisting of 1,301 members (306 males, 308 females and 687 children) in three health centres in Bankura District and Dhubulia Permanent Liability Camp in Nadia District. The food yeast was administered as 1/8 oz. per head per day in the first week, and the dose was gradually raised till 1/2 oz. per head per day was being consumed at the end of four weeks. (Unfortunately, the method of preparation of food yeast for consumption has not been given in the report). The recipients, in general, did not like the inclusion of food yeast in their dietaries, complaints being mainly against its taste and smell. The trial period was four months. Improvement in general conditions and weight gain, regression of symptoms of B_2-complex deficiency were some of the results which could be attributed to food yeast. A small proportion of the population under trial complained of alimentary upsets.

IV. *Ameliorative Measures* : UNICEF skim milk powder was distributed to the vulnerable groups of the population through the leading voluntary organizations, schools, maternity and child welfare centres, orphanages and hospitals. A large number of people benefited by this scheme.

Mid-day meal schemes with grants-in-aid from the State Government were in progress in 60 Government and aided schools in the State. Nearly 28,000 children in 351 schools also received free supplements of UNICEF skim milk.

More than 220 industrial canteens in various industries are at present functioning in the State. Mostly tea and snacks are being served. Canteens are also being opened in Government offices.

V. *Education and publicity* : Talks on nutrition and dietetics were given as a routine by the lady health visitors, sanitary inspectors, health officers, rural medical officers of health, school medical officers, and by the public health nurses and school health nurses in Calcutta during their routine follow-up work.

TABLE I—*Diet surveys*

Particulars			RURAL								
			Visakhapatnam Taluq								
			Adavi-varam	Pendur-thi	Purushot-patnam	Butchi-rajapalem	Gopala-patnam	Marri-palem	Yellapuvan-palem	Kotha-palem	Chand-ramma-palem
1. Mode of diet surveys		...	weighing of foodstuffs								
2. Period over which surveys were made		...	seven days								
3. Month and year		...	Oct. 1955	Nov. 1955	Nov. 1955	April 1956	May 1956	June 1956	July 1956	Aug. 1956	Aug. 1956
4. No. of families surveyed		...	24	12	12	24	24	12	12	12	12
5. Composition of families :											
Adults	Males	...	50	25	17	51	40	21	21	22	27
	Females	...	52	27	24	39	38	21	25	16	26
Children under 12	Males	...	38	10	10	35	15	14	10	12	14
	Females	...	29	16	11	35	32	15	15	12	8
6. Average consumption units per family		...	5.7	5.4	4.3	5.3	4.3	4.8	4.9	4.2	5.3
7. Occupation		...	labourers, merchants, cultivators, landlords, etc.								

TABLE II —*Average daily intake of foodstuffs per consumption unit in oz.*

Foodstuffs	Monthly income per family			
	Rs. 50/- and below (81 families)	Rs. 50/- to 100/- (36 families)	Rs. 100/- to 200/- (19 families)	Rs. 200/- to 400/- and above (8 families)
Cereals				
Rice ...	16.1	14.4	14.7	13.9
Millets ...	4.5	2.0	0.8	...
Wheat ...	nil	0.3	0.2	0.6
Pulses and beans ...	0.7	1.2	1.1	1.6
Leafy vegetables ...	0.2	0.5	0.4	0.4
Other vegetables ...	0.9	1.7	1.7	3.5
Fruits ...	tr.	0.2	0.5	0.8
Ghee/vegetable oil ...	0.5	0.7	0.8	1.8
Milk and milk products ...	0.1	1.8	6.0	8.8
Meat/Fish/eggs ...	0.7	0.4	0.8	1.2
Sugar and jaggery ...	0.3	0.5	0.8	2.7
Condiments ...	1.1	2.0	1.2	2.0

ANDHRA

TABLE III—*Nutrition Surveys*

Number surveyed :

A. From families in which diets were surveyed :

Adults :	Males	...	274
	Females	...	268
	Total	...	542
Children :	Males	...	158
	Females	...	173
	Total	...	331

Out of 873, the nutrition status of 445 individuals was clinically assessed.

244	belonging to income groups	Rs. 50/- and below.
173	—do—	Rs. 50/- to Rs. 100/-
96	—do—	Rs. 100/- to Rs. 200/-
32	—do—	Rs. 200/- to Rs. 400/-
545		

B. Children from schools (diets not surveyed) :

1. 846	belonging to income groups	Rs. 50/- and below.
869	—do—	Rs. 50/- to Rs. 100/-
247	—do—	Rs. 100/- to Rs. 200/-
47	—do—	Rs. 200/- to Rs. 400/-
2,009		

C. Locality of survey with month and year :

(Visakhapatnam Municipality from December 1955 to September 1956)

Adavivaram	...	October, 1955
Pendurthi	...	November, 1955
Purushottampalem	...	November, 1955
Butchirajapalem	...	April, 1956
Gopalapatnam	...	May, 1956
Marripalem	...	June, 1956
Yellapuvanipalem	...	July, 1956
Kottapalem & Maduravada	...	August, 1956

TABLE IV—*Results of Nutrition Surveys according to Routine Nutrition Survey Schedule of the Nutrition Advisory Committee.*

	Monthly income groups			
	From families whose diets were surveyed			
	Rs. 50/- and below	Rs. 50/- to 100/-	Rs. 100/- to 200/-	Rs. 200/- to 400/- and above
General appearance :				
Good ...	35	28	21	9
Fair ...	137	100	51	22
Poor ...	68	44	23	1
Very poor ...	4	1	1	...
Eyes :				
Conjunctival xerosis of grades 2 and 3 only ...	42	31	30	4
Cornea xerosis ...	1	1	2	...
Vascularisation ...	15	11	4	...
Night blindness ...	2	...	...	2
Angular conjunctivitis ...	...	1	...	...
Mouth :				
Angular stomatitis ...	22	9	1	2
Tongue, red ...	11	...	1	1
Glazed and atrophic ...	...	...	...	...
Fissured ...	46	29	13	2
Bleeding gums ...	21	9	10	2
Chalky, pitted or mottled teeth ...	...	...	...	...
Caries ...	6	3	3	...
Hair :				
Discoloured and dry ...	20	13	3	...
Skin :				
Dry, rough and lustreless	59	25	19	8
Phrynoderma ...	2	1	1	...
Adipose tissue, deficiency of	42	39	17	3
Oedema ...	3	...	...	2
Bones :				
Evidence of active or past rickets ...	3	2	1	...
Alimentary system :				
Anorexia ...	16	11	3	2
Diarrhoea ...	...	...	...	...
Palpable liver ...	...	...	...	...
Palpable spleen ...	...	...	...	...
Nervous system :				
Calf tenderness ...	6	4	1	...
Paresthesia ...	4	4	4	...

TABLE IV—(*Contd.*)—*Results of Nutrition Surveys according to Routine Nutrition Survey Schedule of the Nutrition Advisory Committee.*

	Monthly income groups			
	School children—diets not surveyed			
	Rs. 50/- and below (846)	Rs. 50/- to 100/- (869)	Rs. 100/- to 200/- (247)	Rs. 200/- to 400/- and above (47)
General appearance :				
Good ...	97	159	42	18
Fair ...	509	498	137	27
Poor ...	233	209	65	2
Very poor ...	8	3	3	...
Eyes :				
Conjunctival xerosis of grades 2 and 3 only ...	145	108	26	3
Cornea xerosis ...	1	3	...	...
Vascularisation ...	38	24	3	...
Night blindness ...	5	7	2	...
Angular conjunctivitis ...	3	...	...	...
Mouth :				
Angular stomatitis ...	144	120	26	3
Tongue, red ...	22	18	2	3
Glazed and atrophic ...	2	1	...	...
Fissured ...	57	41	11	2
Bleeding gums ...	187	193	57	7
Chalky, pitted or mottled teeth ...	6	2	...	...
Caries ...	61	59	16	3
Hair :				
Discoloured and dry ...	70	33	2	...
Skin :				
Dry, rough and lustreless	191	150	29	2
Phrynoderma ..	5	10	1	...
Adipose tissue, deficiency of	201	168	55	4
Oedema ...	2	...	...	...
Bones :				
Evidence of active or past rickets ...	6	9	1	...
Alimentary system :				
Anorexia ...	10	5	1	...
Diarrhoea ...	...	...	...	...
Palpable liver ...	5	...	...	...
Palpable spleen ...	...	2	...	...
Nervous system :				
Calf tenderness ...	2	...	...	...
Paresthesia ...	...	...	...	...

TABLE V—*Diet surveys.*

Particulars	RURAL				
	Purnea	Darbhanga	Ranchi	Mazaffarpur	Muzaffarpur
	Chandi Katwa Dewarganj Mathia Belorri	Shankerpur Sakari Chak Mehasi Pokhraira	Semartoli Bhowar Pahar	Sasoula	Bulakipur
1. Mode of diet surveys ...	weighing of foodstuffs				
2. Period of diet survey (in days) ...	10 days				
3. Month, year ...	Aug. & Sept. 1955	March & April 1955	March 1956	June 1956	August 1956
4. Number of families surveyed ...	100	75	25	50	50
5. Composition of families :					
Adults : Males ...	161	138	36	109	87
Adults : Females ...	159	157	37	105	99
Children under 12 : Males ...	87	47	15	61	46
Children under 12 : Females ...	87	74	31	38	41
6. Average consumption unit per family ...	3.9	4.9	4.7	4.8	4.9
7. Total income per family per month (Rs.) ...	20/-	19/-	17/-	...	...
8. Occupation ...	cultivation and labour				

TABLE VI—*Average daily intake of foodstuffs per consumption unit in oz.*

Foodstuffs		RURAL				
		Purnea	Darbhanga	Ranchi		
		Chandi Katwa Dipnagar Mathia Beloria	Shankerpur Sakri Chak Mehasi Pokhraira	Semartoli Bhowar Pahar	Sasoula	Bulakipur
Cereals :						
Rice	...	20.3	3.2	11.6	12.1	15.6
Millets	...	0.6	6.6	3.5	1.2	2.1
Wheat	...	0.5	0.2	0.3	1.0	0.5
Pulses and beans	...	2.3	2.1	1.4	1.9	2.8
Leafy vegetables	...	1.3	0.8	1.9	0.1	0.1
Non-leafy vegetables	...	2.2	11.0	1.9	5.5	4.1
Fruits	...	...	...	nil	nil	nil
Ghee/vegetable oil	...	0.2	0.1	0.2	0.1	0.1
Milk and milk products	...	0.2	0.1	nil	nil	0.4
Meat/fish/eggs	...	nil	0.6	0.3	0.3	0.5
Sugar and jaggery	...	...	...	...	...	...
Condiments	...	0.1	0.1	0.1	0.1	0.1
Other foodstuffs	...	0.2	nil	0.9	nil	nil

BIHAR

TABLE VII—*Nutrition surveys—Number examined.*

A. From families in whom diets were surveyed :

Adults	Males	...	nil
	Females	...	nil
Children under 12	Males	...	645
	Females	...	438

B. Children from school (diet not surveyed) :

Males from 5 to 14 years	...	267
Females from 5 to 13 years	...	216
Total	...	483

C. Locality of survey with month and year :

(i) Ranipatra Sarvodaya area, District Purnea—Sept. 1955.

(ii) Pusa Community Project area, District Darbhanga—Jan. 1956.

(iii) Semartoli and Bhowar Pahar, District Ranchi—March 1956.

(iv) Bihar Ekangarsari District Patna—August 1956.

Development Block.

(v) Barbigha, District Monghyr—August 1956.

TABLE VIII—*Results of nutrition surveys according to Routine Nutrition Survey Schedule of the Nutrition Advisory Committee (in percentage).*

	RURAL					
	Purnea		Darbhanga		Ranchi	
	Ranipatra Sarbodya area		Pusa Community Project area		Semartoli Bhowarpahar	
	Boys	Girls	Boys	Girls	Boys	Girls
Total number examined ...	217	126	229	158	93	74
General appearance :						
Good ...	11.9	11.1	11.3	10.1	17.4	20.2
Fair ...	55.3	54.7	46.3	44.9	46.2	44.5
Poor ...	26.2	28.5	31.8	38.6	24.6	27.0
Very poor ...	6.4	5.5	10.5	6.3	11.8	8.2
Eyes :						
Conjunctival xerosis of grade 2 and 3 only ...	4.1	3.9	3.0	3.7	3.2	5.4
Cornea xerosis ...	2.7	3.1	2.6	1.2	2.1	...
Vascularisation ...	4.6	5.5	1.7	2.5	...	2.7
Night blindness ...	...	...	...	...	...	...
Angular conjunctivitis ...	3.2	5.5	5.2	5.0	6.4	6.7
Mouth :						
Angular stomatitis ...	5.0	6.3	4.3	6.3	11.8	8.1
Tongue, red, glazed and atrophic	7.8	7.1	6.1	7.5	13.9	5.4
Fissured ...	4.6	3.9	1.7	1.8	7.5	4.0
Bleeding gums ...	5.5	6.3	3.4	4.4	4.3	...
Chalky, pitted or mottled teeth	...	...	...	...	...	...
Caries ...	7.8	7.9	8.2	7.8	13.9	10.8
Hair :						
Discoloured ...	3.2	2.3	6.1	5.6	...	...
Skin :						
Dry, rough and lustreless ...	8.7	7.9	5.2	4.4	8.6	5.4
Phrynoderma ...	5.5	6.3	6.9	9.4	6.4	8.1
Collar pigmentation ...	...	...	...	...	...	...
Nasolabial seborrhoea ...	...	...	...	...	...	...
Symmetrical suborbital pigmentation ...	...	...	1.3	2.5	...	...
Scrotal or pudendal dermatitis	...	...	...	...	...	...
Symmetrical dermatitis of glove and stocking type ...	...	...	...	...	...	...
Adipose tissue—deficiency of ...	14.7	15.0	16.1	11.3	18.2	20.2
Oedema ...	...	...	...	...	...	...
Bones :						
Evidence of active or past rickets	...	...	...	...	4.3	4.5
Alimentary system :						
Anorexia ...	9.6	11.1	8.7	8.2	9.6	10.8
Diarrhoea ...	11.5	9.5	11.3	7.5	13.9	12.1
Palpable liver ...	...	...	...	...	...	...
Palpable spleen ...	...	...	...	...	...	...
Nervous system :						
Calf tenderness ...	2.7	2.3	1.7	1.2	5.3	1.3

TABLE VIII—(*contd.*) *Results of nutrition surveys according to Routine Nutrition Survey Schedule of the Nutrition Advisory Committe (in percentage)*

		RURAL			
		Patna		Monghyr	
		Bihar Barbigha & Ekangasarai Project Block		Barbigha	
		Boys	Girls	Boys	Girls
Total number examined	...	106	80	267	216
General appearance :					
Good	...	19.8	18.7	12.7	13.4
Fair	...	44.3	48.7	53.2	51.8
Poor	...	25.5	23.7	26.3	28.2
Very poor	...	10.3	8.7	7.8	6.4
Eyes :					
Conjunctival xerosis of grade 2 and 3 only	...	6.6	5.0	3.3	4.1
Cornea xerosis	...	2.8	2.5	2.2	2.7
Vascularisation	...	3.7	6.2	5.2	5.0
Night blindness	...	...	...	...	...
Angular conjuctivitis	...	12.2	13.7	6.3	4.7
Mouth :					
Angular stomatitis	...	17.9	23.7	13.8	12.0
Tongue, red, glazed and atrophic	...	6.6	8.7	10.1	10.6
Fissured	...	4.7	3.7	6.3	7.8
Bleeding gums	...	7.5	6.2	5.2	4.1
Chalky, pitted or mottled teeth	...	...	..	...	...
Caries	...	10.3	11.2	12.7	13.4
Hair :					
Discoloured	...	8.4	...	5.2	2.7
Skin :					
Dry, rough and lustreless	...	6.6	8.7	7.8	9.2
Phrynoderma	...	7.5	5.0	9.3	6.4
Collar pigmentation	...	...	...	...	...
Nasolabial seborrohoea	...	...	...	...	...
Symmetrical suborbital pigmentation	...	1.8	..	...	...
Scrotal or pudendal dermatitis	...	...	...	...	...
Symmetrical dermatitis of glove and stocking type	...	..	...	...	..
Adipose tissue—deficiency of	...	22.6	26.2	21.7	24.5
Oedema	...	...	...	..	...
Bones :					
Evidence of active or past rickets	...	3.7	2.5	3.3	2.3
Alimentary system :					
Anorexia	...	16.0	15.0	10.1	10.6
Diarrhoea	...	12.2	17.5	15.3	13.4
Palpable liver	...	7.5	6.2	9.3	6.4
Palpable spleen	...	14.2	11.2	12.7	15.2
Nervous system :					
Calf tenderness	...	4.7	2.5	2.6	4.1

BOMBAY

TABLE IX—*Diet surveys*

Particulars		Dabla Community Varad (District Surat)
1. Mode of diet survey		Questionnare-cum-weighing method. Each family visited once.
2. Period over which surveys were made (in days)		One day for each family.
3. Month and year		February 1956
4. Number of families surveyed		80
5. Compositition families		
Adults (14 years and above)		
	Males	124
	Females	115
Children (under 14 years)		
	Males	69
	Females	79
6. Average cousumption units per family		3.9
7. Total income per family/per month (in Rupees)		During the period of survey, the heads of the families were employed only two or three days in a week on a daily wage of Rs. 1/-. Women were working as domestic servants getting Rs. 2/- 3/- per month plus one meal a day.
8. Occupation		Farm labourers.

BOMBAY

TABLE X—*Average intake of foodstuffs per consumption unit in oz.*

Foodstuffs	Dubla Community, Varad, District Surat.
Rice	1.4
Millet	11.1
Pulses and beans	0.2
Leafy vegetables	0.1
Non-leafy vegetables	2.1
Fruits	...
Ghee/vegetable oils	0.1
Milk and milk products	0.9+12.3 dilute butter milk
Meat/fish/eggs	...
Sugar and jaggery	0.7
Condiments	...
Other foods	—

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TABLE XI—*Nutrition Surveys—General information*

Number examined		Diet and Nutrition Survey	Nutrition Survey 1	Nutrition Survey 2
A. From families in whom diets were surveyed :				
Adults	Males	75		
	Females	97		
Children under 14 years	Males	37		
	Females	58		
B. Children from schools (diets not surveyed)				
Males		72	170	166
Age range in years			(6—17)	(12—26)
Females		91	136	37
Age range in years			(6—21)	(14—20)
C. Locality of survey with month and year		Dubla Community, Varad, Dt. Surat. February 1956	N.K.E. Society's High School, Matunga, Bombay. March 1956.	B.E. League's Worli High School, Worli, Bombay. March 1956.

BOMBAY

TABLE XII— *Nutrition surveys according to the Rapid Survey Schedule of the Nutrition Advisory Committee.*

Grades	Varad						B.E.L. High School Worli, Bombay		N.K.E.S. High School Matunga, Bombay	
	School children		Dubla Community							
			Children		Adults					
	Males	Females	Males	Females	Males	Females	Boys	Girls	Boys	Girls
	72	91	37	58	75	97				
GRADE I ...	3	4	...	1	4	3	80	15	54	53
GRADE II ...	67	74	24	48	69	89	78	21	116	82
Poor musculatrue ...	24	31	9	9	2	4	15	3	19	9
Deficient subcutaneous fat ...	67	74	30	45	42	62	58	14	91	61
Mild anaemia ...	2	5	4	4	6	29	2	3	1	...
Lack of interest in surroundings ...	...	...	1	...	...	...	...	...	...	...
GRADE III ...	2	13	8	7	2	...	8	1	...	1
Group I										
Nutritional oedema (dependent or generalized) ...	...	...	...	...	...	...	...	...	...	...
Gross muscular wasting ...	...	...	1	...	1	...	...	...	...	...
Marked anaemia ...	...	...	...	...	...	1	...	...	...	...
Xerosis of the cornea ...	...	...	...	...	...	...	...	...	...	...
Group II										
Tenderness of the calf ...	...	...	...	...	...	...	...	...	...	...
Red and/or raw tongue ...	1	3	1	3	19	17	4	1	1	...
Glazed tongue ...	...	...	...	...	1	1	..	...	...	...
Stomatitis ...	...	...	...	...	...	...	...	...	...	...
Bleeding gums ...	1	...	...	...	...	...	...	...	...	...
Angular conjunctivitis (bilateral) ...	...	...	...	...	...	...	...	...	...	...
Group III										
Xerosis or pigmented conjunctiva ...	1	2	4	3	...	...	4	1	7	4
Bitot's spots ...	1	1	1	1	...	...	4	...	...	1
Caries ...	7	7	...	3	...	...	8	4	21	17
Dry and/or rough skin ...	9	35	24	44	17	47	1	...	...	...
Crazy pavement skin ...	...	...	...	...	...	...	...	...	...	...
Hyperkeratosis ...	...	...	...	...	...	...	...	...	...	...

TABLE XIII—*The average heights and weights of boys in schools of Ahmedabad Division in Bombay State.*

Age years	Number	Height inches	S.D.	Weight lb.	S.D.
6	275	42.3	± 2.54	34.8	± 4.60
7	583	44.2	± 2.72	37.8	± 5.39
8	745	45.8	± 2.96	40.6	± 5.47
9	877	47.7	± 2.97	44.0	± 6.87
10	1000	49.5	± 2.93	48.0	± 7.29
11	1153	51.6	± 3.04	53.2	± 8.71
12	1267	53.0	± 3.03	57.0	± 9.84
13	1510	55.0	± 3.26	63.2	± 10.95
14	1793	57.0	± 3.61	69.9	± 13.05
15	1729	59.3	± 3.83	77.9	± 14.30
16	1686	61.4	± 3.59	86.5	± 12.30
17	1371	62.7	± 3.42	92.2	± 13.22
18	940	63.7	± 3.10	96.6	± 13.57
19	520	64.1	± 2.71	99.8	± 13.36
20	222	64.3	± 3.03	102.2	± 13.89

TABLE XIV—*The average heights & weights of girls in schools of Ahmedabad Division in Bombay State.*

Age years	Number	Height inches	S.D.	Weight lb.	S.D.
6	109	41.4	± 2.56	34.3	± 5.02
7	294	43.4	± 2.58	36.7	± 5.01
8	369	45.3	± 2.54	40.2	± 5.91
9	410	47.3	± 2.98	43.5	± 7.07
10	491	48.9	± 2.82	46.5	± 6.98
11	518	51.0	± 2.91	51.6	± 8.31
12	522	53.0	± 3.17	57.7	± 10.72
13	506	55.0	± 3.31	65.5	± 12.88
14	512	56.8	± 3.01	72.8	± 12.48
15	440	58.0	± 3.03	78.1	± 11.97
16	290	58.8	± 2.67	83.7	± 12.77
17	201	59.4	± 2.46	86.9	± 10.99
18	94	59.2	± 2.27	87.1	± 10.40
19	23	58.7	± 3.08	87.4	± 16.20
20	9	59.9	± 2.85	92.7	± 20.28

HIMACHAL PRADESH

TABLE XV—*Diet Surveys*

Particulars			RURAL
			Mahasu
			Nirath
1. Mode of diet surveys		...	Actual weighment of food-stuffs
2. Period over which diet surveys were made (days)		...	Ten
3. Month and year		...	April 1956
4. Number of families		...	6
5. Composition of families		...	
Adults	males	...	10
	females	...	14
Children under 12	males	...	10
	females		8
6. Average consumption unit per family			5.5
7. Total income per month per family		...	Rs. 85
8. Occupation			Agriculturists.

HIMACHAL PRADESH

TABLE XVI--*Average daily intake of foodstuffs per consumption unit in oz.*

	RURAL
	Mahasu
	Nirath
Rice	11.7
Wheat	12.5
Maize	4.8
Pulses	2.9
Leafy vegetables	...
Nonleafy vegetables	2.7
Fruits	...
Ghee-vegetable oil	0.3
Milk and milk products	3.0
Meat	0.2
Sugar and jaggery	0.4
Other foodstuffs	...

HYDERABAD

TABLE XVII—*Diet surveys*

Particulars		Aurangabad Distt. N.E.S. Block—Rural	
		A	B
1. Mode of diet surveys		——weighing of foodstuffs——	
2. Period over which surveys were made (in days)		4	4
3. Month and year		October 1955	
4. Number of families surveyed		19	29
5. Composition of families			
Adults	males	49	84
	females	34	34
Children under 12	males	30	20
	females	11	32
6. Average consumption unit per family		5.3	4.8
7. Total income per family per month		Rs. 47/-	Rs. 60/-
8. Occupation		Small agriculturists, daily labourers, carpenters and gangmen.	Agriculturists, agricultural labourers and petty tradesmen.

Group A—denotes income of upto Rs. 10/- per c.u. per month.

Group B—denotes income of Rs. 10/- to Rs. 15/- per c.u. per month.

TABLE XVIII—*Average daily intake of foodstuffs per consumption unit, in oz.*

Particulars	Aurangabad Distt. N.E.S. Block—Rural	
	A	B
Rice	nil	0.1
Wheat	nil	0.1
Millets	24.9	25.0
Pulses & beans	1.6	2.6
Leafy vegetables	nil	nil
Non-leafy vegetables	0.5	1.4
Fruits	nil	nil
Ghee/vegetable oil	0.3	0.4
Milk & milk products	1.4	0.7
Meat/fish/eggs	nil	0.1
Sugar & jaggery	0.4	0.5
Condiments	1.4	1.7
Other foodstuffs	nil	nil

HYDERABAD

TABLE XIX—*Nutrition surveys*

Number examined :

A. From families in whom diets were surveyed :

Adults	Males	...	133
	Females	...	68
	Total	...	201
Children	Males	...	50
	Females	...	43
	Total	...	93

B. Children from schools (diets not surveyed) :

Males (ages from 6 to 14)	...	1362
Females (ages from 6 to 14)	...	nil

C. Locality of survey with month and year

Aurangabad District. N.E.S. Block—October 1955

Hyderabad City—March and August 1956

TABLE XX—*Results of nutrition surveys according to Routine Nutrition Survey of the Nutrition Advisory Committee*

		Urban Hyderabad City (1199)	Rural N.E.S. Block Aurangabad District (163)
General appearance :	Good	172	82
	Fair	357	40
	Poor	420	28
	Very poor	250	13
Eyes :	Conjunctival xerosis of grades 2 and 3 only	57	14
	Cornea—vascularisation	...	2
	Night blindness—angular conjunctivitis	9	2
Mouth :	Angular stomatitis	88	6
	Tongue red	31	3
	Glazed and atrophic	4	...
	Fissured	6	1
	Bleeding gums	45	11
	Chalky, pitted or mottled teeth	48	2
	Caries	25	4
Hair :	Discoloured and dry	68	2
Skin :	Dry, rough and lustreless	64	11
	Collar pigmentation	4	1
	Nasolabial seborrhoea	8	3
	Symmetrical suborbital pigmentation	...	...
	Adipose tissue. deficiency of—	422	75
Bones :	Evidence of active or past rickets	14	3
Alimentary system :	Palpable liver	...	...
	Palpable spleen	...	...

TABLE XXI—*Diet surveys*

Particulars	MADURAI DISTRICT									
	Chittampatty village			Kunnathur village		Velliamkundram village			Harveypatty village	
	Poor Class	Lower middle class	Middle class	Poor class	Lower middle class	Upper class	Middle class	Poor class	Upper class	Middle class
1. Mode of survey	weighment of foodstuffs									
2. Period over which surveys were made (in days)	7 days									
3. Month, year	29-10-1955 to 4-11-1955			November 1955		26-1-55 to 1-2-56			March 1956	
4. No. of families surveyed	6	3	5	5	5	3	5	5	9	5
5. Composition of families :										
Adults : Males	6	7	24	4	8	9	18	8	12	5
Adults : Females	16	5	15	11	11	7	9	6	12	6
Children under 12 : Males	7	6	5	2	3	4	4	4	29	7
Children under 12 : Females	1	...	4	5	...	6	3	1	...	...
6. Average consumption unit per family	4.2	4.9	8.0	3.02	3.6	9.4	7.8	5.2	5.6	3.6
7. Total income per family per month (Rs.)	Below 50/-	50-100/-	100/- & above	Below 50/-	50/- to 100/-	110/-	70/-	39/-	173/-	70/-
8. Occupation	Agriculturists			Cotton mill workers						

TABLE XXI (*Continued*)—*Diet Surveys*

Particulars	CHINGLEPUT DISTRICT											
	Alandur village			Chikkarayapuram village			Kulamanivakkam village			Kathiavakkam village		
	Above Rs. 100	Rs. 50 to 100	Below Rs. 50	Below Rs. 50	Rs. 50 to 100	Above Rs. 100	Below Rs. 50	Rs. 50 to 100	Above Rs. 100	Below Rs. 50	Rs. 50 to 100	Above Rs. 100
1. Mode of diet surveys	weighment of foodstuffs											
2. Period over which surveys were made (in days)	7 days											
3. Month, year	24-2-1956 to 1-3-1956			June 1956			June 1956			August 1956		
4. No. of families surveyed	17	7	12	5	5	4	5	5	5	5	5	5
5. Composition of families :												
Adults : males	42	10	29	11	16	11	11	11	13	6	17	20
Adults : females	45	12	20	10	10	6	12	9	10	6	8	17
Children : males	16	6	8	4	3	2	5	6	1	4	7	9
Children : females	24	5	9	4	1	6	3	4	5	7	3	9
6. Average consumption units per family	6.1	3.9	3.8	4.8	5.5	4.9	5.4	4.9	5.2	3.6	6.1	9 5
7. Total income per family permonth (in Rupees)	316/-	77/-	38/-	45/-	73/-	155/-	39/-	66/-	117/-	38/-	67/-	125/-
8. Occupation	mostly agriculturists			mostly agriculturists			mostly agriculturists			Fishermen		

TABLE XXII—*Nutrition surveys—Average daily intake of foodstuffs per consumption unit, in oz.*

Particulars	MADURAI DISTRICT									
	Chittampatty village			Kunnathur village		Velliamkundram Village			Harveypatty village	
	Below Rs. 50 p.m.	Rs. 50/- to 100/- p.m.	Above Rs. 100/- p.m.	Below Rs. 50/- p.m.	Rs. 50/- to 100/- p.m.	Above Rs. 100/- p.m.	Rs. 50/- to 100/- p.m.	Below Rs. 50/- p.m.	Above Rs. 100/- p.m.	Rs. 50/- to 100/- p.m.
Rice	17.2	16.3	18.7	17.3	18.6	21.0	19.4	18.8	18.0	19.4
Ragi millet	0.4	5.0	4.2	1.2	1.9	1.9	2.3	2.2	0.7 (wheat)	...
Pulses	1.1	1.0	1.4	0.3	2.0	1.8	1.8	1.4	1.4	2.1
Leafy vegetables	0.1	...	0.1	...	0.7	...	...	...	0.8	0.3
Other vegetables	3.0	2.3	3.6	1.0	2.6	2.7	2.8	1.6	2.8	3.1
Milk	...	...	1.8	...	2.2	0.6	2.7	...	7.5	1.4
Ghee/vegetable oils	0.1	0.1	0.2	...	tr.	0.3	0.3	0.2	0.7	0.4
Meat/fish/eggs	0.1	0.1	...	tr.	...	0.4	0.1	tr.	0.5	0.9
Condiments	0.7	0.9	0.9	0.6	1.1	0.9	0.9	0.8	1.3	1.1
Fruits	...	tr.	0.1	...	...	0.1	0.1	...	1.2	0.6
Nuts	0.1	tr.	...	...	...	...	0.2	...	0.4	0.3
Sugar & jaggery	...	...	0.2	...	0.7	0.1	0.1	...	0.6	0.3

TABLE XXII—(*Continued*)—*Nutrition surveys—Average daily intake of foodstuffs per consumption unit, in oz.*

	CHINGLEPUT DISTRICT											
	Alandur village			Chikkarayapuram village			Kulamanivakkam village			Kathiavakkam village		
	Above Rs. 100/-	Rs. 50/- to 100/-	Below Rs. 50/-	Below Rs. 50/-	Rs. 50/- to 100/-	Above Rs. 100/-	Below Rs. 50/-	Rs. 50/- to 100/-	Above Rs. 100/-	Below Rs. 50/-	Rs. 50/- to 100/-	Above Rs. 100/-
Rice	12.8	13.2	12.9	16.0	19.8	21.1	15.2	19.6	19.8	24.9	25.8	24.9
Wheat	0.6	0.3	tr.	...	...	0.1	...	...	...	...	0.1	0.1
Millet	...	...	...	4.5	3.3	1.5	2.8	0.9	2.6	...	...	...
Pulses	2.0	1.9	1.0	0.8	0.8	1.0	0.6	1.1	1.3	1.5	1.2	1.1
Leafy vegetables	0.5	0.5	0.3	0.2	0.2	0.5	0.4	0.7	0.4	1.0	1.0	0.2
Other vegetables	3.3	2.7	2.2	1.4	1.9	1.9	1.3	1.7	2.5	2.0	2.2	2.5
Milk	7.4	3.1	1.4	tr.	...	1.1	2.5	0.7	3.3	...	0.6	0.4
Ghee/vegetable oils	1.3	1.1	0.6	0.4	0.3	0.6	0.3	0.4	0.6	0.3	0.7	1.6
Meat/fish/eggs	1.2	1.0	0.6	0.2	1.0	2.8	0.2	0.5	0.4	5.9	5.9	5.0
Condiments	1.3	1.7	1.2	1.0	1.3	1.4	0.7	1.9	1.5	3.2	2.8	3.5
Fruits	0.5	...	tr.	0.4	0.5	0.4	0.3	0.4	0.3	0.6	0.5	0.7
Nuts	0.7	0.5	0.2	tr.	0.1	0.2	tr.	0.1	0.2	...	0.4	0.6
Sugar & jaggery	1.3	0.8	0.4	tr.	...	0.5	0.1	0.6	1.1	...	...	1.0
Other foodstuffs	...	...	...	tr.	tr.	1.6	...	...	...	...	...	. .

MADRAS

TABLE XXIII—*Institutional diet surveys*

Particulars	Public health nurses and junior health visitors hostel, Madras	Young men's Christian College Hostel Madras	Harijan Hostel, Madurai	Harijan sevalayam (hostel for females)	School for deaf & dumb (boys) Madras	School for deaf & dumb (girls) Madras	Children's home Gandhigram	Service home Gandhigram	Senior basic training school Thambitottam	Meenakshi Devasthanam Orphanage Madurai
Mode of diet surveys	Weighment of foodstuffs									
Period of diet surveys (in days)	7	7	7	7	7	7	7			
Month and year	Aug. 1956	March 1956	Oct. 55	Nov. 55	March 56	Feb. 56	June 56	June 56	June 56	June-July 56
Number suveyed		36	96	69	39	46				

TABLE XXIII—(*Contd.*)—*Institutional diet surveys.*

Foodstuffs	Public health nurses and junior health visitors hostel, Madras	Young men's Christian College Hostel, Madras	Harijan Hostel, Madurai	Harijan sevalayam (hostel for females)	School for deaf & dumb (boys) Madras	Schoolf or deaf & dumb (girls) Madras	Children's home Gandhigram	Service home Gandhigram	Senior basic training school Thambitottam'	Meenakshi Devasthanam Orphanage Madurai
	Average daily intake of foodstuffs per consumption unit, in oz.									
Rice	13,2	9.5	16.5	13.6	12.6	11.8	10.7	14.6	14.0	10.7
Wheat	2.3	...	...	...	2.8	0.7	...	...	0.3	...
Millets	0.4	...	1.3	...	1.1	1.3	5.0	...	...	5.0
Other cereals	...	...	...	...	...	...	...	...	...	...
Pulses	1.1	7.7	1.2	1.7	1.3	1.3	2.1	3.3	1.7	1.4
Leafy vegetables	0.9	3.2	1.1	0.2	1.1	0.8	1.2	0.7	1.1	...
Other vegetables	5.3	7.1	4.0	1.4	5.5	4.0	7.2	11.1	3.9	2.2
Fruits	1.6	...	...	...	0.8	0.8	2.4	...	0.6	...
Ghee/vegetable oil	1.5	1.2	0.8	0.4	0.1	...	0.5	2.8	0.3	0 3
Milk & milk products	2.1 (skim)	5.3*	2.9	2.1	1.9*	0.7 +0.5*	9.7	15.7	4.1	10.4 (butter milk)
Meat/fish/eggs	2.5	0.3	...	...	0.8	0.7	...	...	...	...
Sugar & jaggery	1.4	3.2	...	...	0.6	0.3	0.3	1.8	0.1	...
Condiments	...	1.7	0.5	0.5	0.7	0.5	0.5	0.7	0.5	0.5
Other foodstuffs	0.5†	2.2†	0.1†	0.1†	0.3	0.3	0.4†	0.8	0.4†	0.3†

*Skin milk powder.

†Nuts.

TABLE XXIV—*Nutrition surveys by the Routine Nutritional Assessment Schedule of the Nutrition Advisory Committee.*

Locality Total number examined		Madurai 669 boys	Madurai 317 girls	Madras 123 boys
General appearance :	Good	292	175	43
	Fair	358	141	70
	Poor	19	1	10
Xerosis of conjunctiva of grades 2 and 3		56	10	18
Pigmentation of grades 2 and 3		42	5	3
Corneal vascularisation		24	5	...
Angular conjunctivitis		1	...	...
Night blindness		4	1	...
Angular stomatitis		61	22	1
Red and raw tongue		19	9	21
Fissured/ulcerated/glazed tongue		21	10	1
Bleeding gums		7	3	2
Fluorosis		...	...	1
Caries		70	11	7
Dry and rough skin		5	...	13
Phrynoderma		...	3	...
Symmetrical dermatitis with glove or stocking type pigmentation		...	2	...
Nasolabial seborrhoea		5	...	1
Scrotal or pudendal dermatitis		152	...	...
Symmetrical suborbital pigmentation		...	...	3
Deficient adipose tissue		140	91	43
Stigmata of past rickets		3	2	2

NORTH EAST FRONTIER AGENCY

TABLE XXV—*A sample goitre survey in N.E.F.A.*

Particulars	Phuttung 7000 feet			Norsing 7000 feet			Rupa 5100 feet		
	Males	Females	Total	Males	Females	Total	Males	Females	Total
No. surveyed	82	38	120	46	59	105	149	151	300
No. with enlarged thyroids	55	25	80	17	32	49	11	73	84
No. with severe enlargement	15	5	20	...	3	3	...	9	9
No. with secondary complications, such as engorged neck veins, pressure symptoms, etc.	18	6	24	...	4	4	...	7	7

PUNJAB

TABLE XXVI—*Diet surveys*

Particulars	Indian Woollen Mills Chheharta	Oriental Carpet Indian Chheharta
1. Mode of diet surveys	—— weighing of foodstuffs ——	
2. Period over which surveys were made (in days)	7	7
3. Month, year	May 1956	May 1956
4. No. of families surveyed	13	37
5. Composition of families :		
Males	22	56
Females	14	43
Children under 12 :		
Males	16	37
Females	11	37
6. Average consumption units per family	4	4
7. Total income per family per month	Rs. 92/-	Rs. 103/-
8. Occupation	factory workers	

TABLE XXVII—*Average daily intake of foodstuffs per consumption unit in oz.*

Foodstuffs		Indian Woollen Mills, Chheharta	Oriental Carpet Indian Chheharta
Rice	...	2.8	2.0
Wheat	...	11.8	15.5
Pulses	...	2.8	2.2
Root vegetables	...	2.9	2.0
Other vegetables	...	3.8	5.0
Fruits	...	1.0	0.7
Milk and milk products	...	7.1	9.0
Ghee/vegetable oil	...	1.3	1.3
Sugar and jaggery	...	3.4	4.0
Meat/fish/eggs	...	0.2	0.2



NUT-100

UTTAR PRADESH

TABLE XXVIII—*Diet surveys*

	Urban	Rural					
	Dt. Lucknow	Dt. Lucknow	Dt. Hardoi	Dt. Mirzapur	Dt. Lucknow	Dt. Basti	Dt. Hardoi
	Lucknow City	Village Indaurabagh	Town Bilgram	Dudhi	Bakshi-ka-Talab Extension-cum-Training Centre	Village Thana	Villages in four tehsils
1. Mode of diet surveys	Questionnaire and weighing of foodstuffs						
2. Period over which surveys were made (in days)	seven to ten days						
3. Month, year	June 1956	July 1956	August 1956	July-August 1956	June 1956	Sept. 1956	Sept. 1956
4. No. of families surveyed	9	6	Hostel of Educational Institution	24	Old and New messes of the training centre	12	29
5. Composition of families :							
Adults — males	25	12	47 boys	60	69 (old mess) 38 (new mess)	26	81
Adults — females	10	7	...	46	...	23	86
Children under 12 — males	9	3					
Children under 12 — females	3	1		46		12	52
6. Average consumption units per family	4.5	3.2		5.0		4.6	5.6
7. Total income per family per month	Rs. 143/-	Under Rs. 50/-		Rs. 79/-	Below Rs. 100/-	About Rs. 50/-	Rs. 120/-
8. Occupation	Lab. Assts. & Clerks	Labourers and Agriculturists	Students	Labourers and Agriculturists	Village level workers	Mostly labourers & agriculturists	Farming, agriculturists and labourers

TABLE XXIX—*Average daily intake of foodstuffs per consumption unit, in oz.*

	Urban	Rural						
	Dt. Lucknow	Dt. Lucknow	Dt. Hardoi	Dt. Mirzapur	Dt. Lucknow		Dt. Basti	Dt. Hardoi
	Lucknow City	Indaura-bagh	Town Bilgram	Dudhi	Bakshi-ka-Talab Extension-cum-Training Centre		Village Thana	Village in four tehsils
					Old Mess	*New Mess*		
Rice	5.1	3.1	...	5.7	7.4	8.0	10.1	3.3
Wheat	11.5	8.3	18.7	0.6	16.0	16.0	6.2	11.5
Millets	0.9	13.5	...	15.7	...	...	7.5	11.1
Pulses	2.8	5.6	4.2	1.7	5.9	5.0	2.7	3.6
Leafy vegetables	2.0	...	...	3.9	...	...	3.4	2.2
Non-leafy vegetables	6.0	3.6	0.6	1.9	10.0	10.0	3.6	6.0
Fruits	2.4	...	...	...	1.1	1.1	0.4	0.2
Ghee/vegetable oil	1.7	0.6	1.2	0.2	1.5	1.5	1.2	1.1
Milk and milk products	5.3	1.9	...	1.1	2.0	2.0	1.1	3.9
Meat/fish/eggs	1.0	..	...	0.1	...	..	1.9	0.8
Sugar and jaggery	1.1	1.3	...	0.3	1.5	1.1	2.6	2.2
Condiments	...	...	...	...		...	..	...
Other foodstuffs	1.1	...	...	...	1.8	1.0	1.1	0.3

UTTAR PRADESH

TABLE XXX—*Nutrition Surveys General Information*

Number examined		...	750
A. 1. From families in whom diets were surveyed :			
Adults :	Males	...	38
	Females	...	30
	Total	...	68
Children :	Males	...	10
	Females	...	6
	Total	...	16
2. Male adults (village level worker trainees) age from 22-35 years in whom diets were surveyed		...	107
B. 1. Children from schools (diets not surveyed)			
	Males (age 8—14 years)	...	260
	Females (age 8—12 years)	...	7
2. From families in whom diets were not surveyed			
Adults :	Males	...	88
	Females	...	78
	Total	...	166
Children :		...	126

C. Locality of survey with month and year.

1. District Basti, village Thana		
(a) Before the feeding trial of food yeast		January 1956.
(b) After feeding trial of food yeast	...	April 1956.
2. District Lucknow, village Indaurabagh		
(a) Before the feeding trial of food yeast	...	February 1956
(b) After the feeding trial of food yeast	...	July 1956.
3. District Lucknow, Bakshi-ka-Talab Training cum-Extension Centre	...	June 1956
4. District Hardoi, Town Bilgram	...	August 1956

TABLE XXXI—*Nutrition surveys according to Routine Nutrition Survey Schedule of the Nutrition Advisory Committee.*

Particulars	District Basti, Thana village		District Lucknow village Indaurabagh	
	Before feeding trial of food yeast	After feeding trial of food yeast	Before feeding trial of food yeast	After feeding trial of food yeast
Number of persons examined	125	125	57	57
General appearance :				
Good	19	34	35	38
Fair	54	46	12	14
Poor	41	37	9	4
Very poor	11	8	1	1
Eyes :				
Conjunctiva xerosis of grades 2 and 3 only	14	11	9	9
Cornea-xerosis	9	3	4	3
Vascularisation of Cornea	39	37	1	1
Night blindness	0	2	0	0
Angular conjunctivitis	2	5	2	2
Mouth :				
Angular stomatitis	3	0	0	0
Tongue, red	4	0	1	0
Glazed & atrophic, fissured	2	1	1	0
Bleeding gums	12	13	17	14
Chalky, pitted or mottled teeth	0	0	0	0
Caries	34	34	18	18
Hair : Discoloured and dry	49	49	5	5
Skin : Dry, rough & lustreless	29	10	12	4
Phrynoderma	0	0	0	0
Nasolabial seb.	4	4	2	0
Adipose tissue, deficient	44	40	2	2
Oedema	2	0	1	1
Bones : Evidence of active or past rickets	2	2	1	1
Alimentary system: Anorexia	4	1	1	0
Diarrhoea	1	2	2	0
Palpable liver	0	0	0	0
Palpable spleen	0	0	0	0
Nervous system :				
Calf tenderness	1	0	0	0
Paresthesia	0	0	0	0

TABLE XXXI—*Nutrition surveys according to Routine Nutrition Survey Schedule of the Nutrition Advisory Committee.*

Particulars	District Lucknow Bakshi-ka-Talab Extension Training-Cum-Centre		District Hardoi, Town Bilgram	
	Village level worker Trainees		Junior High School	
Number of persons examined	Old Mess	New Mess	Boys	Girls
	69	38	260	7
General appearance :				
Good	58	28	172	4
Fair	9	9	27	1
Poor	1	1	46	2
Very poor	11	0	15	0
Eyes :				
Conjunctiva xerosis of grades 2 and 3 only	1	4	18	0
Cornea-xerosis	0	0	0	0
Vascularisation of cornea	5	3	55	0
Night blindness	0	0	0	0
Angular conjunctivitis	0	0	0	0
Mouth :				
Angular stomatitis	1	0	0	0
Tongue, red	0	0	2	0
Glazed & atrophic, fissured	0	0	0	0
Bleeding Gums	9	7	8	0
Chalky, pitted or mottled teeth	0	0	0	0
Caries	12	5	22	2
Hair : Discoloured and dry	0	0	6	0
Skin : Dry, rough & lustreless	0	0	1	0
Phrynoderma	0	0	0	0
Nasolabial seb.	0	0	0	0
Adipose tissue, deficient	0	0	65	2
Oedema	0	0	0	0
Bones : Evidence of active or past rickets	0	0	1	0
Alimentary system : Anorexia	0	1	0	0
Diarrhoea	0	0	0	0
Palpable liver	0	0	0	0
Palpable spleen	0	0	0	0
Nervous system :				
Calf tenderness	0	0	0	0
Paresthesia	0	0	0	0

TABLE XXXII—*Diet surveys*

Particulars	Rural areas			
	District—24-Parganas			
	Barrackpur	Bongaon	Basirhat	Diamond-Harbour
1. Mode of diet surveys	weighment of foodstuffs			
2. Period over which surveys were made (in days)	seven days			
3. Month, year	August 1956	July & August 1956	July to September 1956	July & August 1956
4. Number of families surveyed	14	24	24	24
5. Composition of families				
Adults — Males	23	72	41	71
Adults — Females	26	61	45	75
Children under 12 — Males	8	37	28	52
Children under 12 — Females	18	43	23	41
6. Average consumption unit per family	4.4	7.3	4.6	9.0
7. Total income per family per month	Rs. 83/-	Rs. 90/-	Rs. 70/-	Rs. 121/-
8. Occupation	Service Cash dole	Cultivators, labourers, petty tradesmen, and service.	Cultivators, farmers, petty tradesmen, and service.	Farmers, petty tradesmen, professionals and service.

TABLE XXXIII—*Average daily intake of foodstuffs per consumption unit, in oz.*

Particulars	Rural areas			
	District—24—Parganas			
	Barrackpur	Bongaon	Basirhat	Diamond-Harbour
Rice	15.9	21.5	14.7	19.9
Wheat	4.2	0.3	2.0	0.9
Pulses and beans	4.0	2.5	1.4	2.2
Leafy vegetables	1.6	3.8	2.2	2.4
Other vegetables	5.8	3.7	2.5	7.2
Fruits	0.8	0.8	1.1	3.3
Ghee/vegetable oil	0.6	0.5	0.7	0.8
Milk	2.5	2.7	3.1	2.1
Meat/fish/eggs	2.3	1.4	1.7	3.1
Sugar and jaggery	1.8	0.9	1.4	1.3
Condiments	...	0.6	0.2	0.7
Other foodstuffs	0.3	0.1	0.2	0.8

TABLE XXXIV—*Nutrition Surveys general information*

A. Children from schools (diets not surveyed)

1. Routine Survey—Males (ages from 5 years to 20 years) ... 418
Females (age from 5 years to 13 years) ... 103

Total ... 521

Locality of survey with month and year

District	Sub-Division	Area	Period of survey
1. Nadia	Sadar (Krishnagar)	1. Dharmada, 2. Mira, 3. Panighata, 4. Bagchi, Jamserpur Union Health Centres	June, July & August 1956
2. Darjeeling	Siliguri	1. Naxalbari Thana Health Centre, 2. Khoribari, 3. & 4. Matigara Union Health Centres	April to August 1956
3. Bankura	Sadar	1. Taldangra, 2. Onda, 3. Thana Health Centres, and 4. Belia-tore Union Health Centre	May to September 1956
4. Howrah	Uluberia	1. Kamalpur, 2. Debipur, 3. Harishpur, and 4. Jhinkra Union Health Centres	March to August 1956

2. Rapid Survey—Males (age from 8 years to 18 years) ... 100

Howrah	Sadar	Jagacha in Jagacha P.S.	July and August 1956
		Abhoynagar and Napattey in Bally P.S.	

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